P-013

Police Modifier Bulletin

SVE BULLETIN

SPECIAL VEHICLE ENGINEERING – BODY BUILDERS ADVISORY SERVICE

E-Mail via website: www.fleet.ford.com/truckbbas (click "Contact Us")
Toll-free: (877) 840-4338

Date: 27 November, 2012

2013 Sedan Interceptor Trunk Upfit Package (854)

Models Affected
2013 Sedan Interceptors with Trunk Upfit Package (854) beginning Job #1 2013MY.

Purpose
This bulletin provides the Sedan Trunk Upfit Package (854) content description and wiring information.

Trunk Upfit Package (854) Content Summary

Ford-installed Police options are fully compliant with the United States Federal Motor Vehicle (FMVSS) and Canadian Motor Vehicle Safety Standards.

Electrical systems and power distribution circuits meet Ford Motor Company requirements. All power circuits have grounds that are designed integral to the vehicle and chassis design per Ford Motor company requirements.

Sedan Trunk Upfit Package (854) Content Summary

Feature Description	Package 854	See Page
Two (2) flashing front corner LED lights, one (1) in each headlight assembly.		
Two (2) flashing LED wig-wag(white light)/Park(amber light)/Turn Signal(amber light) lights, one (1) in each headlight assembly replacing the Park/Turn indicator lights		
Two (2) flashing LED grille lights. Red LED light on driver side light and blue LED light on passenger side is standard color configuration. Optional LED light colors are available through VSO options.		
Two (2) flashing LED tail lamps, one (1) in each tail lamp assembly. Red is standard color for both tail lamps. OEM LED color options not available behind tail lamp red lens.		
Two (2) flashing LED deck lights, with matching interior color shrouds (Charcoal). Red LED light on driver side and blue LED light on passenger side is standard color configuration. Optional LED light colors are available through VSO options.		
Two (2) flashing inner trunk lid LED lights, visible when trunk lid is open. Red LED light on driver side and blue LED light on passenger side is standard color configuration. Optional LED light colors are available through VSO options.		
Wire Harness includes the following:		
• **Two (2) 50 amp fused lines** from underhood Battery Junction Box (BJB) fed to in trunk location on lower driver side, corresponding ground located on sheet metal near termination point of two (2) 50 amp fused lines.	X	21
• **14-way (gray) connector,** behind trim cover panel at bottom of center stack containing following power and vehicle signals: o B+ Feed #1 (20 Amp) – from Instrument Panel (IP) o Police 4 Button Controller – Button 1 Output – Switched Ground o Police 4 Button Controller – Button 2 Output – Switched Ground o Police 4 Button Controller – Button 3 Output – Switched Ground o Police 4 Button Controller – Button 4 Output – Switched Ground o Police Fused Start Feed (2 Amp) o Police Fused Run/Start Feed #1 (20 Amp) o B+ Feed #2 (20 Amp) o Vehicle Speed Output o Delayed Accessory (15 Amp) - from Instrument Panel (IP) o B+ Feed #3 (15 Amp) – from Instrument Panel (IP) o Park Detect - Shifter o Driver Door Ajar – from Instrument Panel (IP) o Police Fused Run/Start Feed #2 (20 Amp) – from Instrument Panel (IP)	X	11
• **6-way (gray) connector**, behind trim cover panel at bottom of center stack containing following power and grounds: o Three (3) 40 Amp Fused Circuits from underhood BJB o Three (3) Corresponding Instrument Panel Tunnel Ground	X	11
• **Siren Speaker 4-Way Connector** o Passenger compartment connector located below instrument panel behind driver side trim cover panel at bottom of center stack (see photo) o Underhood connector location is driver side of engine compartment below headlight assembly near vehicle horn assembly	X	13

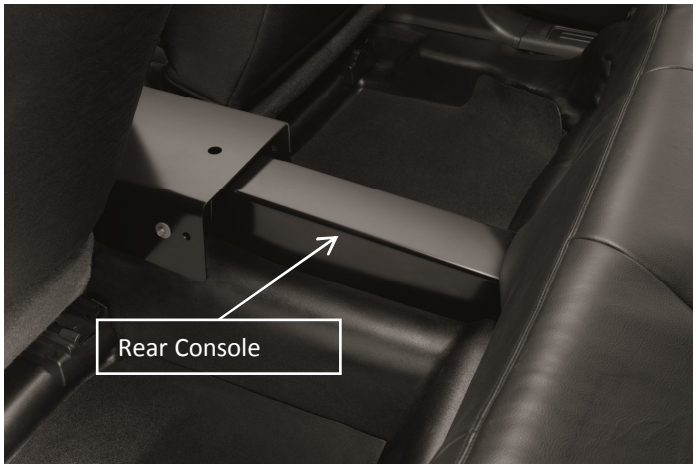
Sedan Trunk Upfit Package (854) Content Summary

Feature Description	Package 854	See Page
• **14-way (white) connector,** taped to harness behind the center stack trim cover panel on the passenger side in the opening the center stack area below the instrument panel containing the following: o Front Wig-Wag Control o Front Wig-Wag Flasher Power o Loudspeaker (-) - pass-through from trunk to underhood OEM speaker location (driver side behind front fascia below headlight hear vehicle horns) o Loudspeaker (+)(-) - pass-through from trunk to underhood OEM speaker location (driver side behind front fascia below headlight hear vehicle horns o Dimmer Circuit o Front Corner LED Lights Power o Front Corner LED Lights Ground o Front Corner LED Lights Flash Pattern o Front Corner LED Lights SYNCH o Brake Output – from Instrument Panel (IP)	X	14
• **Horn Ring Circuit,** ground side loop of horn ring circuit from Body Control Module (BCM) violet-green wire loop taped to harness from above the opening under the center stack area of the instrument panel	X	15
Pre-wire for grille lamp, siren and speaker, electrical harness inlay (14290); inlay includes (2) light connectors that support up to (3) LED lights each (in engine compartment), (1) grille LED light connector that supports 2 LED lights, and one front driver's side speaker siren cable	X	25
Rear Console Mounting Plate, mounts to rear of front console mounting plate and proceeds rearward on top of the driveline tunnel to and partially under the second row seat (acting as wiring channel through towards the trunk)	X	4
Trunk Circulation Fan, wired to run under ignition power and circulates air from the cabin into the trunk	X	5
Trunk Electronics Tray, aluminum with dual lever release; latches in the stowed position and the open/most rearward position	X	4
Trunk Storage Vault, lockable, located on driver side of trunk well		
Hidden Door Lock Plunger, manual lock rod extending horizontally from rear passenger door accessible to from first row driver position or first row passenger seating position		
100-watt Siren/Speaker, plus wire and connector		
Police Power Control Center and Control Head, includes controller, control head (push buttons & switch lever) and cable, does not include siren		
Microphone, includes cable		

Sedan Trunk Upfit Package (854) Content Description

Rear Console Plate

- Channel that interfaces with the rear opening of the front console mounting plate and runs rearward on top of driveline tunnel extending under the second row seat
- Available pathway for wiring from front center interior of vehicle into trunk area

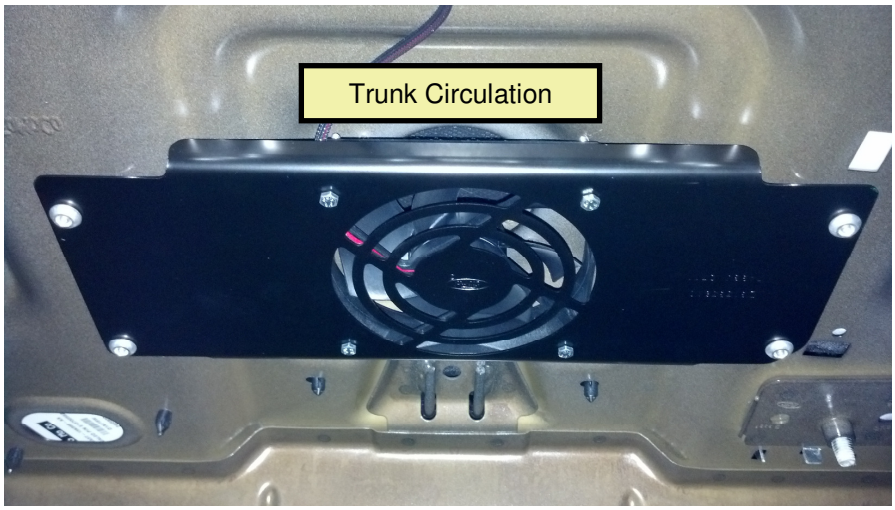


Trunk Electronics Tray

- Aluminum tray with slides and dual latches.
    - Tray latches in both the extended and stowed positions

Trunk Circulation Fan

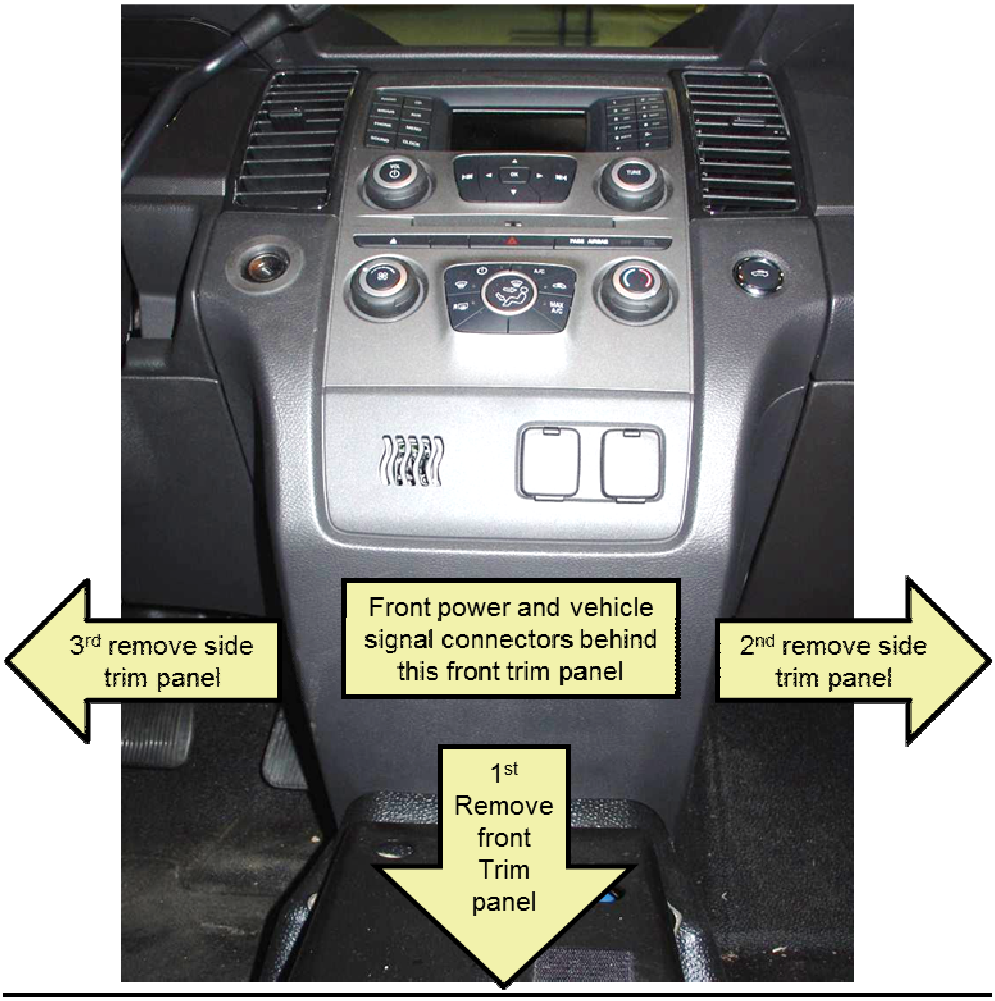
- Fan is mounted on bottom side of rear deck behind 2nd row seat in trunk
- Trunk circulation fan pulls air from interior of vehicle into trunk
- Trunk is vented at bottom on driver and passenger sides
- Fan is wired complete and fully functional as vehicle is delivered – operates with "key on" position – feed from underhood Battery Junction Box (BJB) "Run Start Feed #1" circuit



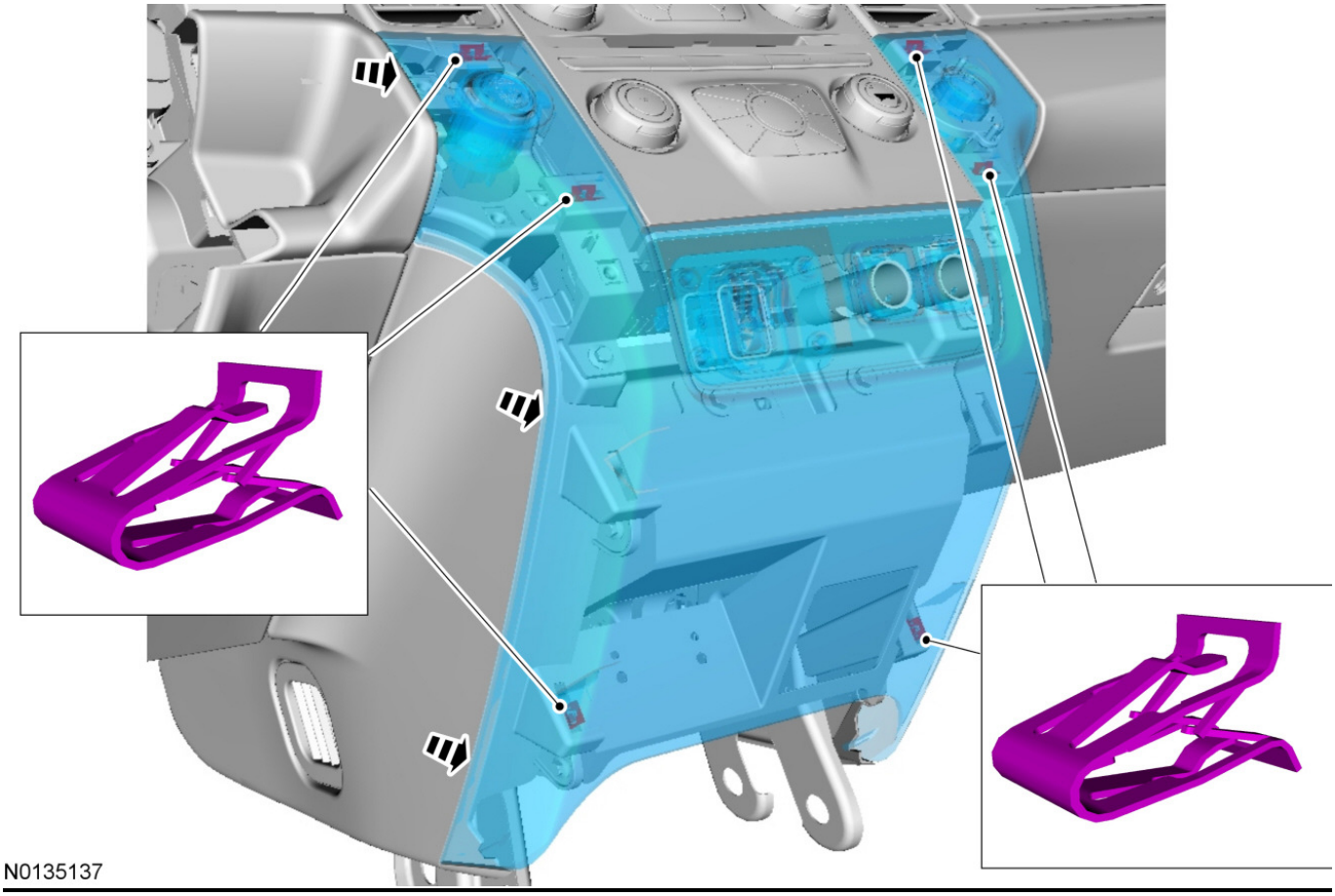
Sedan Trunk Upfit Package (854) Content Description

Front Power and Vehicle Signal Access Area

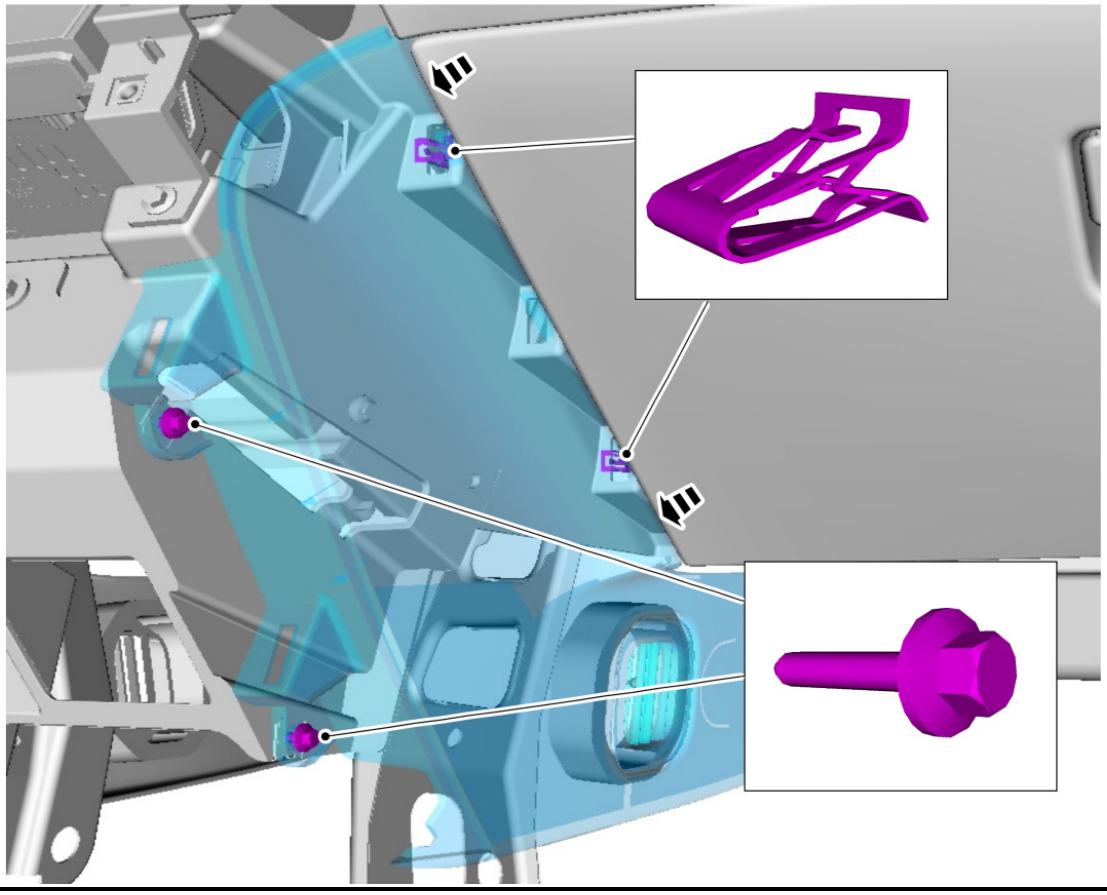
- **Located behind lower center instrument panel trim panels**
- **See following pages for removal and installation**


3rd remove side trim panel
Front power and vehicle signal connectors behind this front trim panel
2nd remove side trim panel
1st Remove front Trim panel

Remove lower center instrument panel finish panel

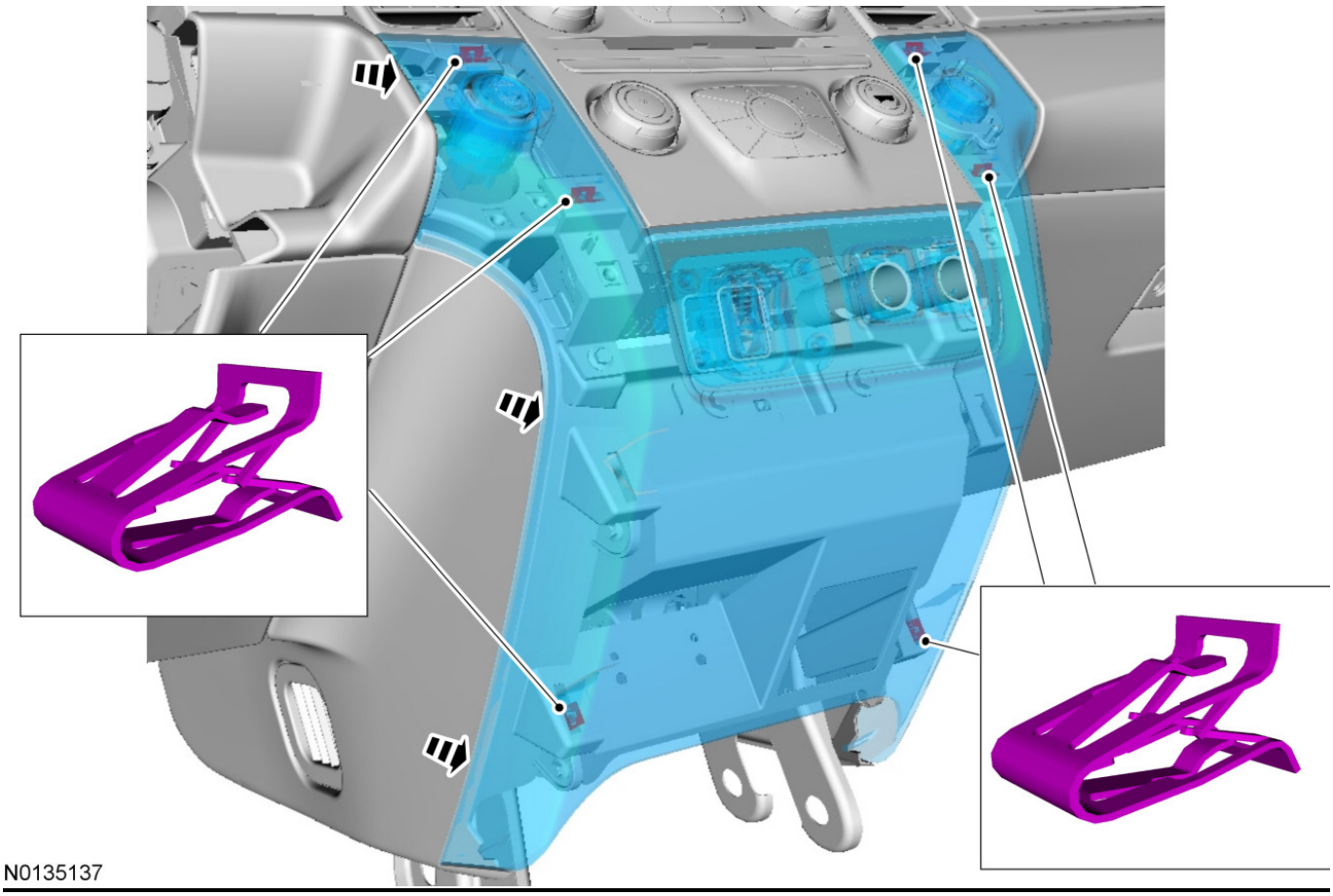


Remove Passenger Side and Driver Side lower center instrument panel side panels



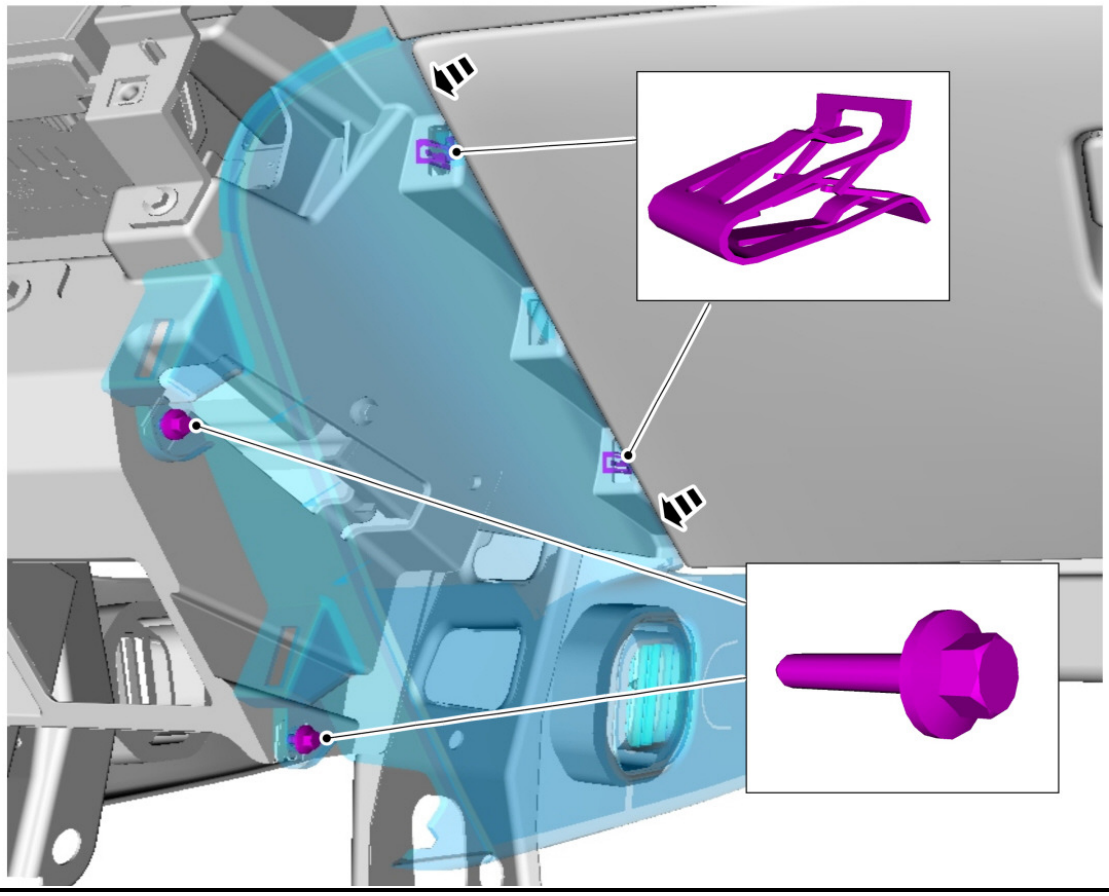
Reinstall lower center instrument panel trim front panel by reversing removal procedure

- Align the center stack to the instrument panel opening and reconnect the (4) connectors. **Note: perform "push-click-push" test process to ensure each is secure**
- Align lower driver and passenger side retention tabs located on the inside of center stack panel to the corresponding notches located in the passenger and driver side lower valance panels.
- Position retention clips on the backside of the center stack to the corresponding slots in the instrument panel.
- Push the center stack in until each of the retention clips are fully engaged. Check around the periphery of the center stack to ensure it is flush to the instrument panel upon installation. **Note: Verify the lower driver side and passenger side retention tabs of center stack panel are seated into the driver side and passenger side valance panel notch locations upon installation.**



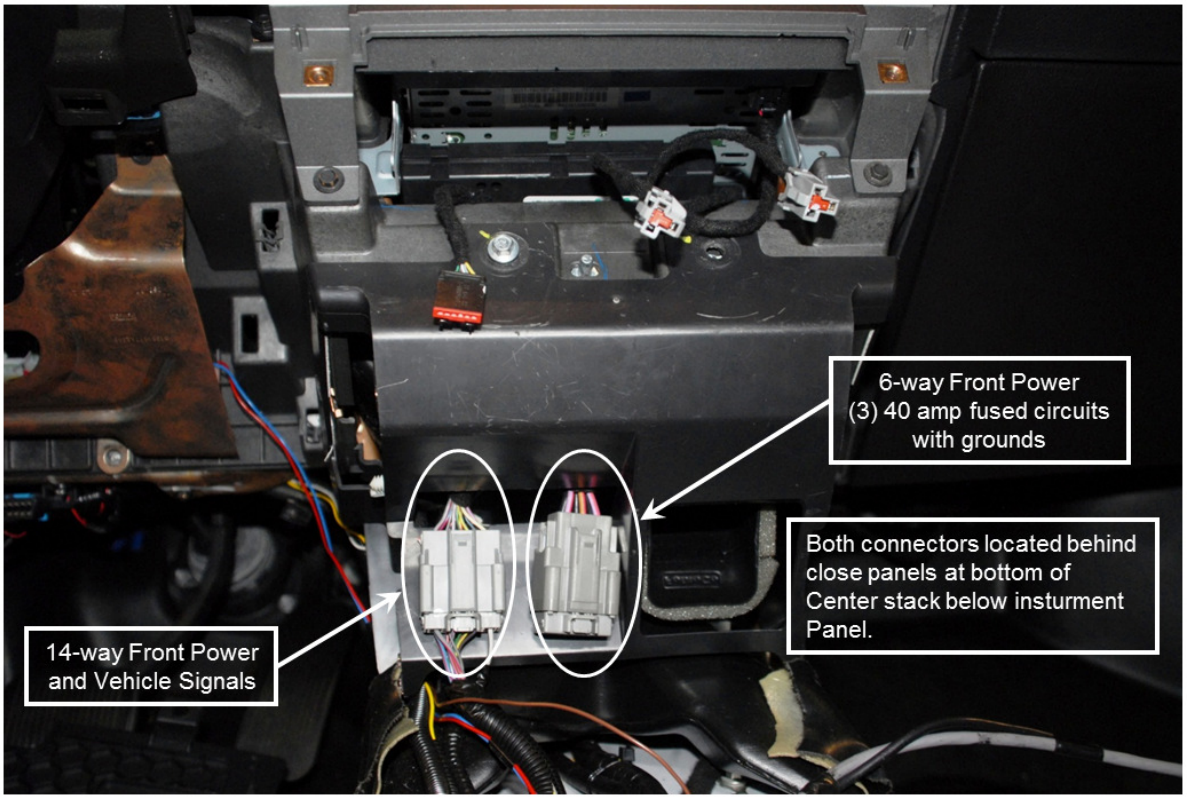
Reinstall Driver Side and Passenger Side lower center instrument panel side trim panels

- **Tighten fasteners to 3 NM (27 lb-in)**



Sedan Trunk Upfit Package (854) Content Description

Front Power and Vehicle Signals Access Area



14-Way Front Power & Vehicle Signals

Part #: 3U2Z-14S411-BJAC

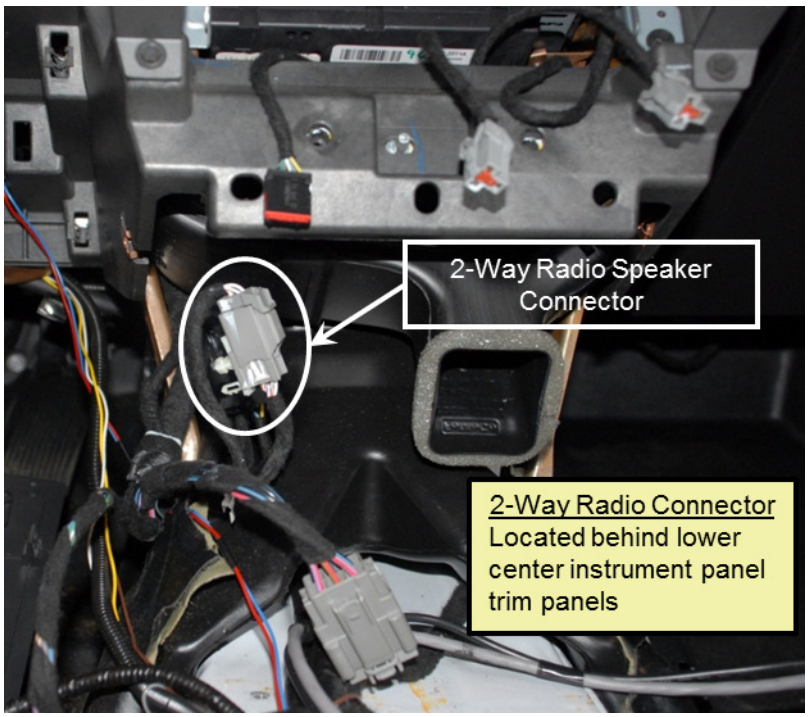
Pin #	Description	Fuse	Wire Color
1	B + Feed #1 (20A)	IP #2	GY-RD
2	Steering Wheel Switch #1 Output (1A) – Grnd	Gnrl Fnctn Module	GY-BN
3	Steering Wheel Switch #2 Output (1A) – Grnd	Gnrl Fnctn Module	WH-VT
4	Steering Wheel Switch #3 Output (1A) – Grnd	Gnrl Fnctn Module	GN-BN
5	Steering Wheel Switch #4 Output (1A) – Grnd	Gnrl Fnctn Module	YE-GY
6	Start (2 A)	BJB #95	BN-BU
7	Run/Start #1 (20 A)	BJB #73	WH-BN
8	B+ Feed #2 (20 A)	IP #32	BU-RD
9	Vehicle Speed Output (VSS)	PCM	VT-OG
10	Delay Accessory (15 A)	IP #17	GN-VT
11	B + Feed #3 (15 A)	IP #5	YE-RD
12	Park Detect Signal (Transmission)	Shifter – Grnd	GN
13	Driver Door Ajar Signal	IP #9-Grnd	GN-VT
14	Run/Start #2 (20 A)	IP #74	VT-BN

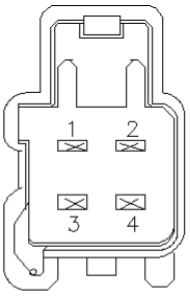
6-Way Front Power

Part #: 3U2Z-14S411-HEA

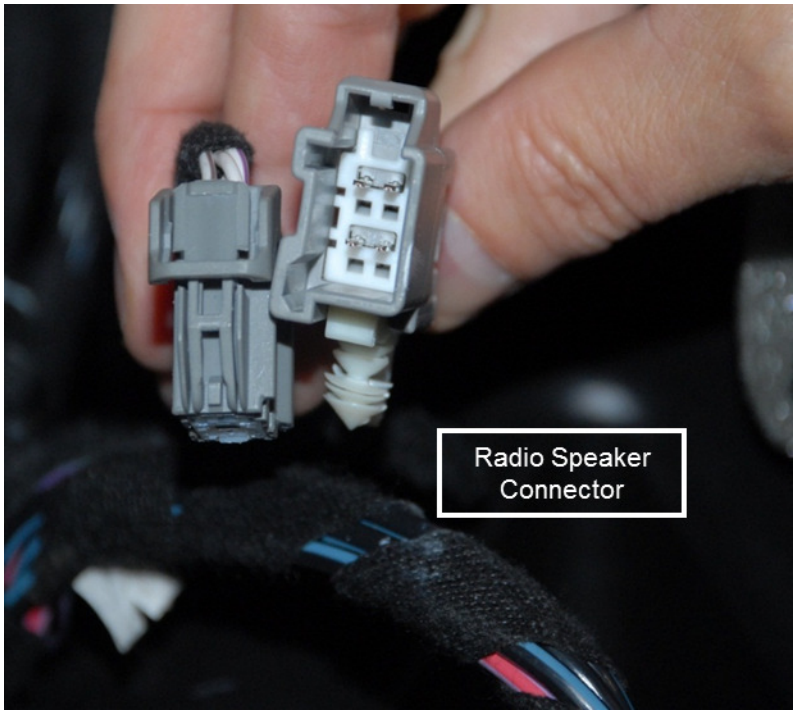
Pin #	Description	Fuse	Wire Color
1	B + (40 A)	BJB #40	VT-RD
2	B + (40 A)	BJB #6	BN-RD
3	B + (40 A)	BJB #16	VT-RD
4	Ground	IP Tunnel	BK-BU
5	Ground	IP Tunnel	BK-BU
6	Ground	IP Tunnel	BK-BU

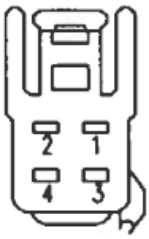
Radio and Speaker Connector





Part #: 3U2Z-14S411-BUB

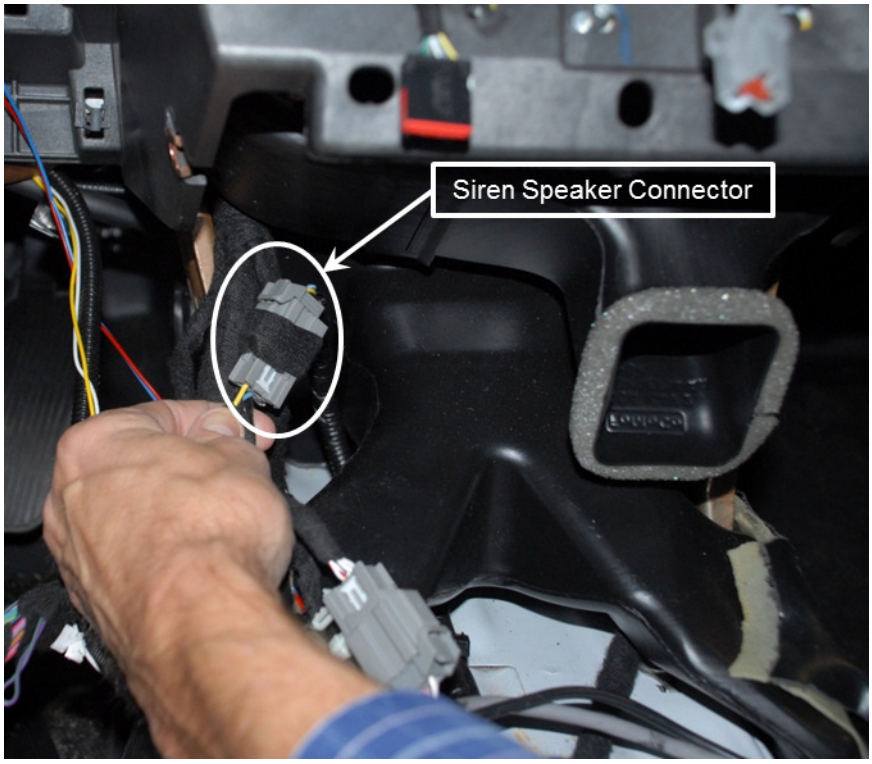


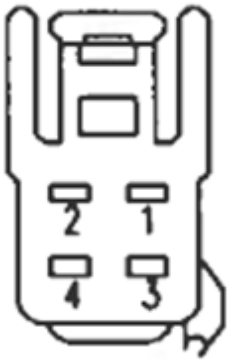


Part #: 3U2Z-14S411-LUB

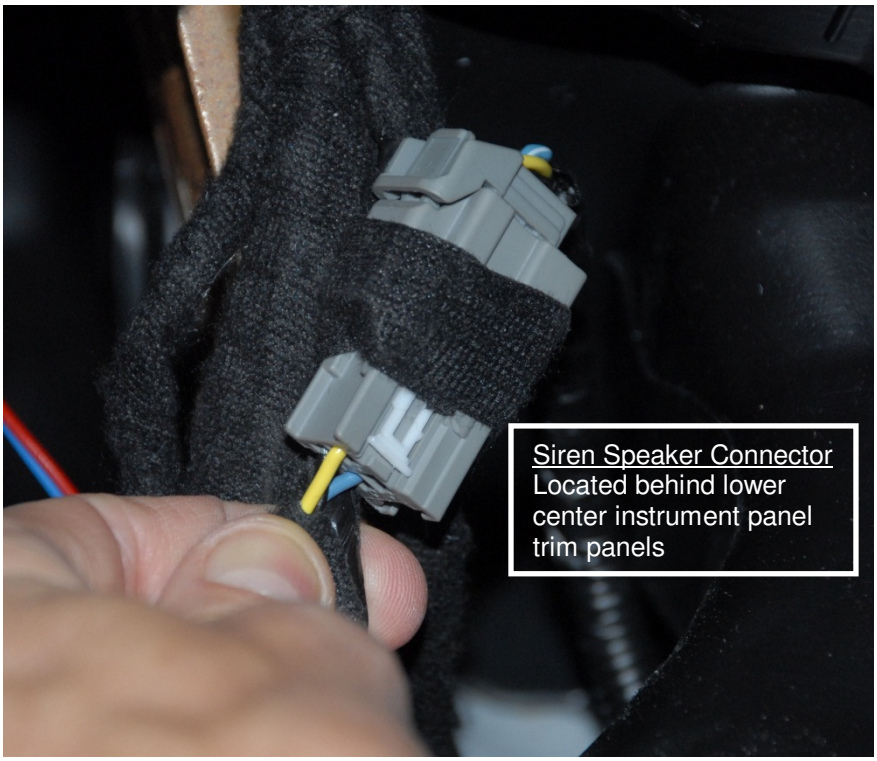
Pin #	Description
1	Driver Side Front Speaker (+)
2	Driver Side Front Speaker (-)
3	Passenger Side Front Speaker (+)
4	Passenger Side Front Speaker (+)

Siren Speaker Connector





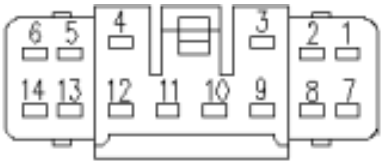
Part #: 3U2Z-14S411-LUB



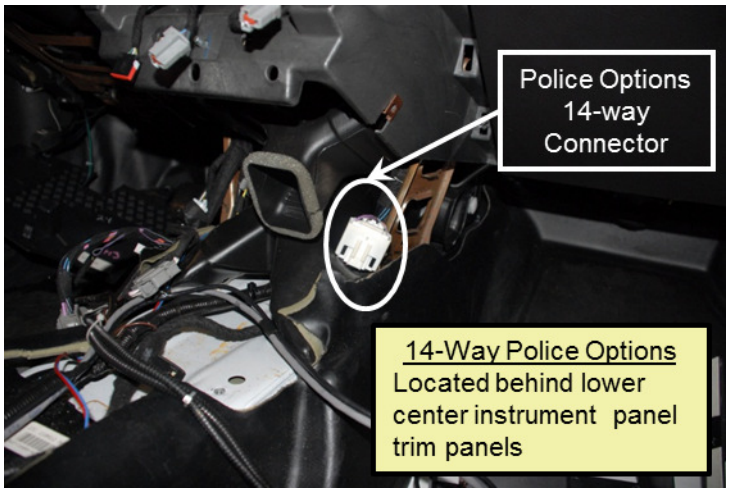
Pin #	Description	Wire Color
1	Siren Driver Side Feed (+)	YE
2	Siren Shield Driver Side (-)	
3	Open Pass Side Front (+)	
4	Siren Return Pass Side Front (-)	BU-WH

Sedan Trunk Upfit Package (854) Content Description

Police Options 14-Way Connector



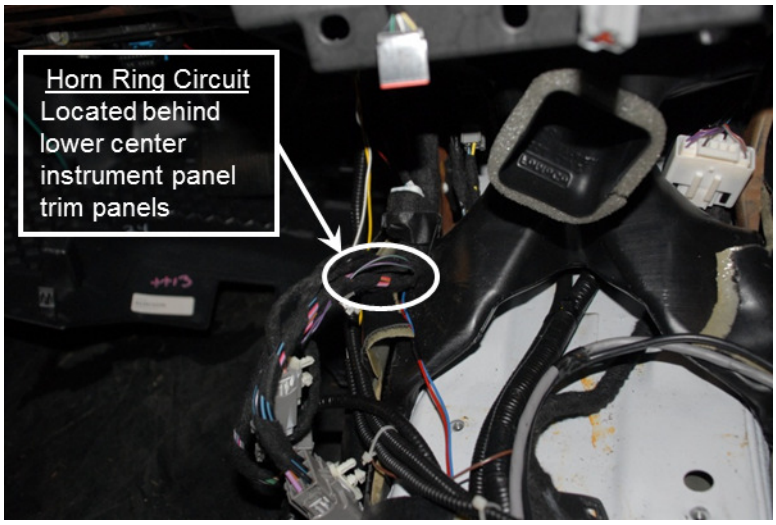
Part #: CU2Z-14S411-APA

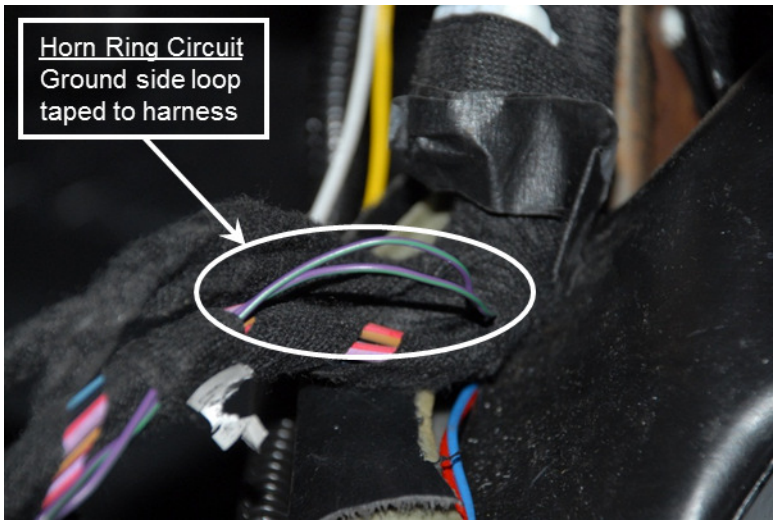


Pin #	Description	Wire Color
1	Wig-Wag Control	VT
2	Front Corner LED Power Control	VT-OG
3	Front Flasher Power Control	BN-YE
4	Speaker (-) at Grille (Option)	GN-BU
5	Open	
6	Front Corner LED Light Synch	GY-OG
7	Dimmer	VT-GY
8	Brake Output Signal – Ground	BU-OG
9	Speaker (+) at Grille (Option)	BN
10	Open	
11	Open	
12	Open	
13	Open	
14	LED Flash Pattern	GY-BN

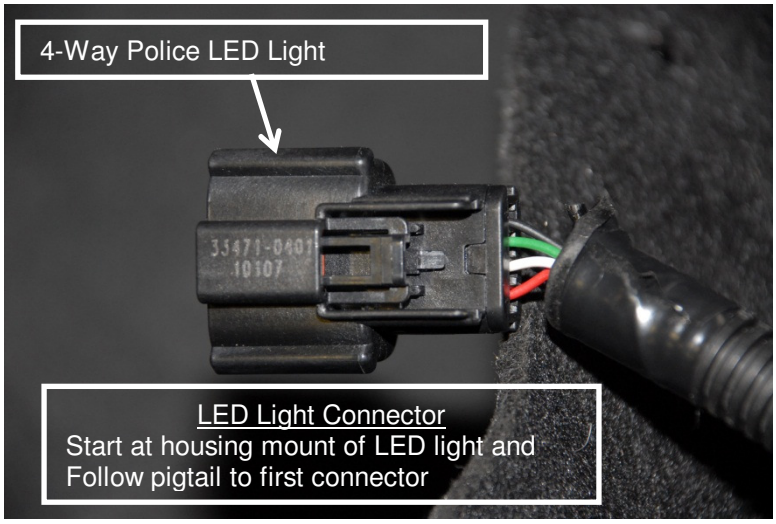
Sedan Trunk Upfit Package (854) Content Description

- **Horn Ring Circuit,** ground side loop of horn ring circuit from Body Control Module (BCM) VT-GN wire loop taped to harness from above the opening in lower center instrument panel trim panels



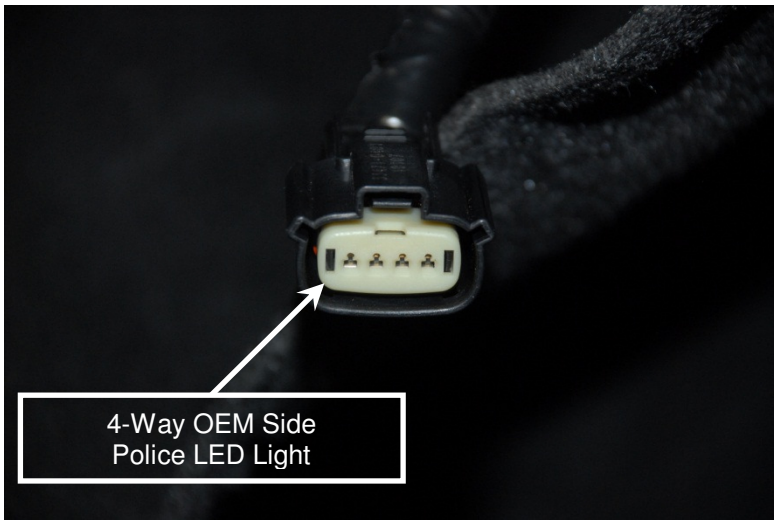


4-Way Connectors for ALL Police LED Light Heads



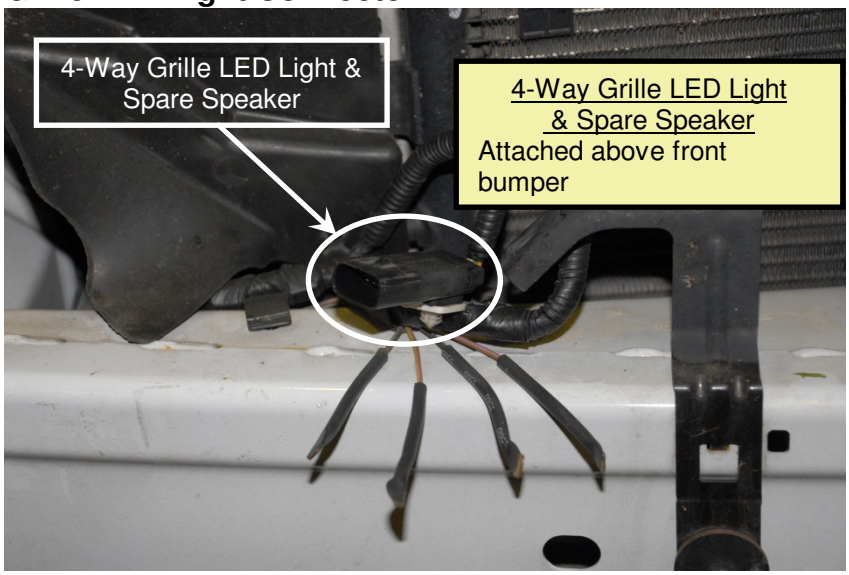
Part #: 8U2Z-14S411-TA

Pin #	Description
1	Control Power
2	LED Light Pattern
3	LED Light Synch
4	Ground



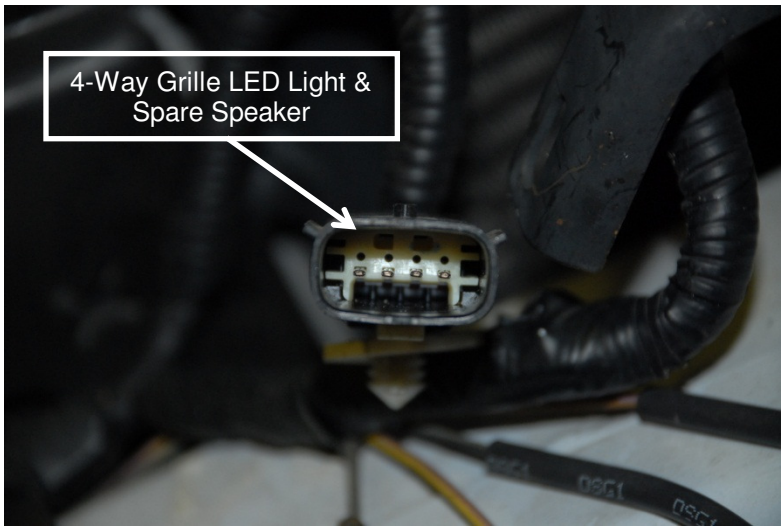
Sedan Trunk Upfit Package (854) Content Description

Grille LED Light Connector



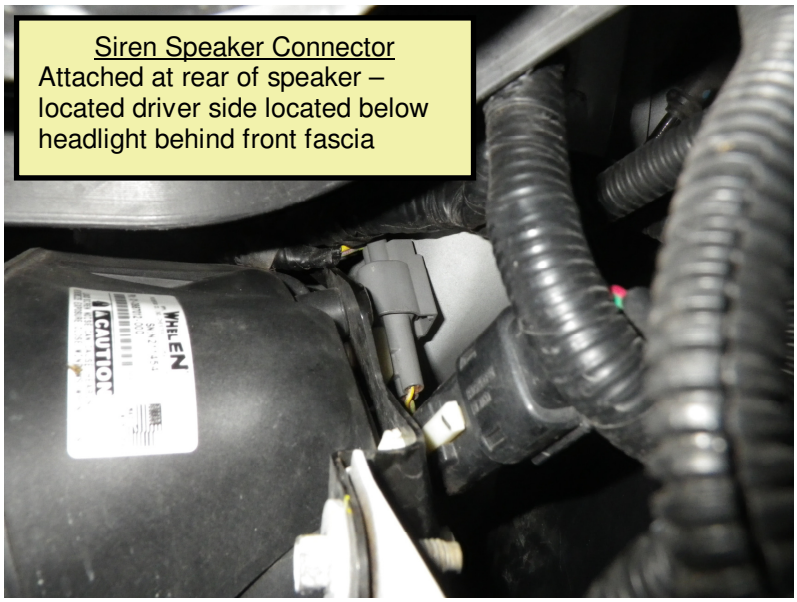
Part #: 8U2Z-14S411-TA

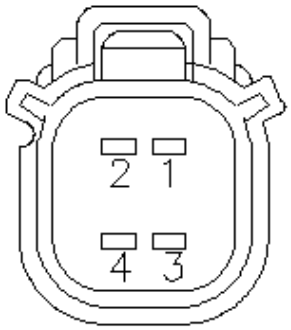
Pin #	Description	Wire Color
1	Grille LED Light Ground	BN
2	Grille LED Light Pattern	GY-BN
3	Speaker (-)	GY-OG
4	Speaker (+) - Spare	BK-GY



Sedan Trunk Upfit Package (854) Content Description

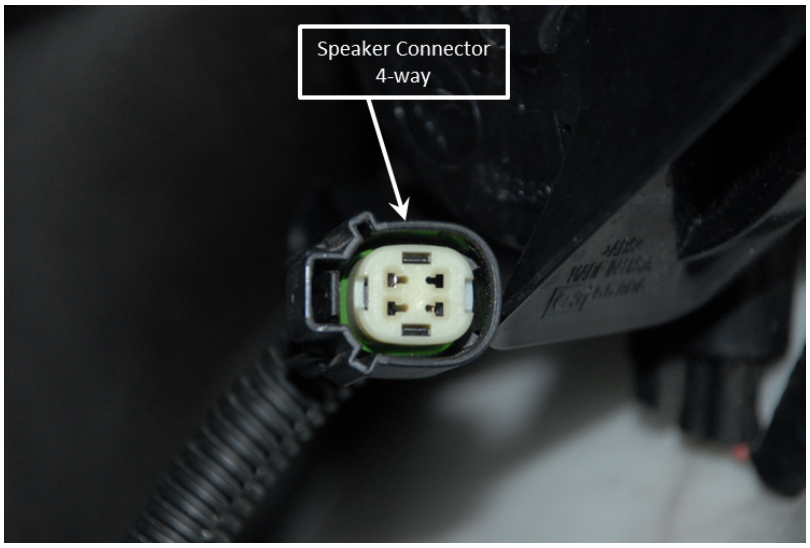
Siren Speaker - Connector Underhood



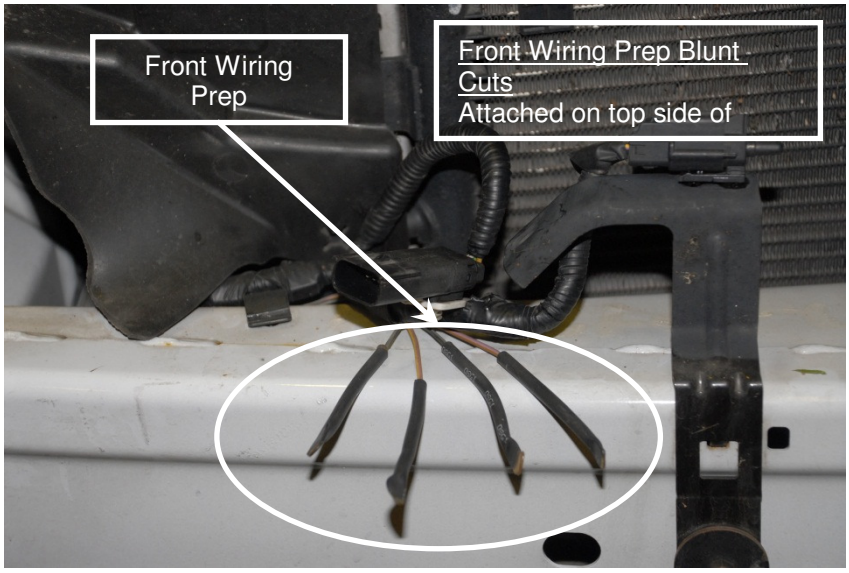


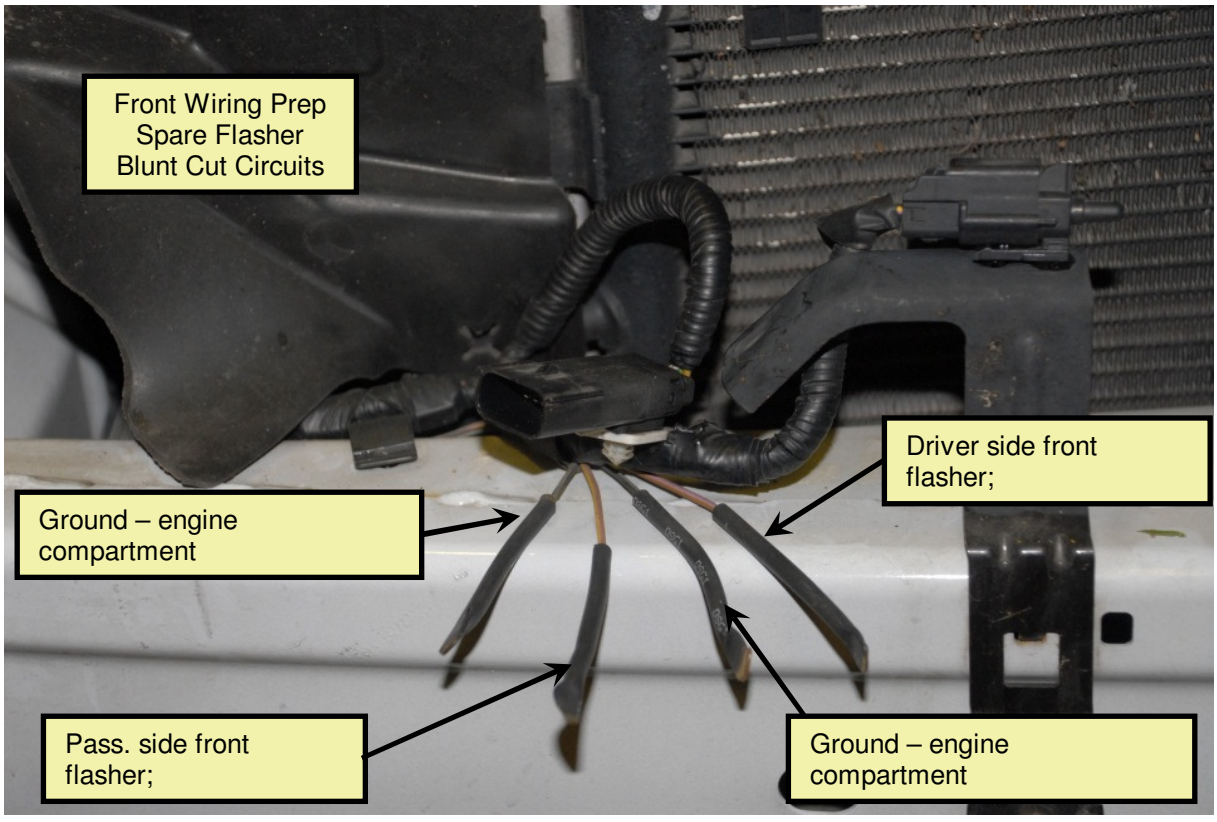
Part #: BU2Z-14S411-TA

Pin #	Description	Wire Color
1	Siren (+)	YE
2	Open	
3	Open	
4	Siren (-)	BU-WH



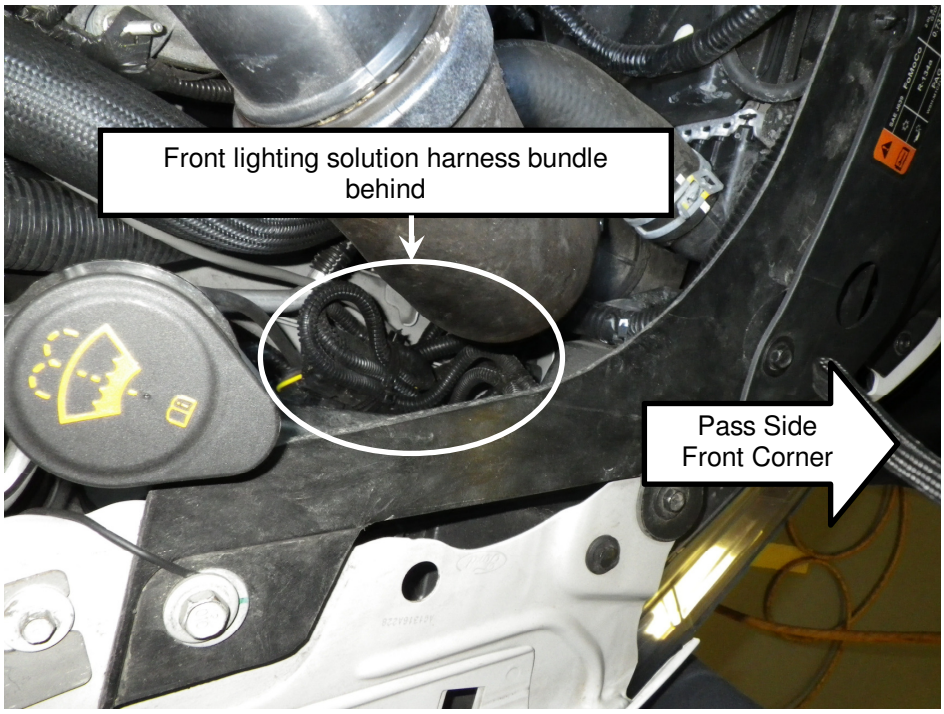
Front Wiring Prep Blunt Cut Circuits




Front Wiring Prep Spare Flasher Blunt Cut Circuits
Driver side front flasher;
Ground – engine compartment
Pass. side front flasher;
Ground – engine compartment

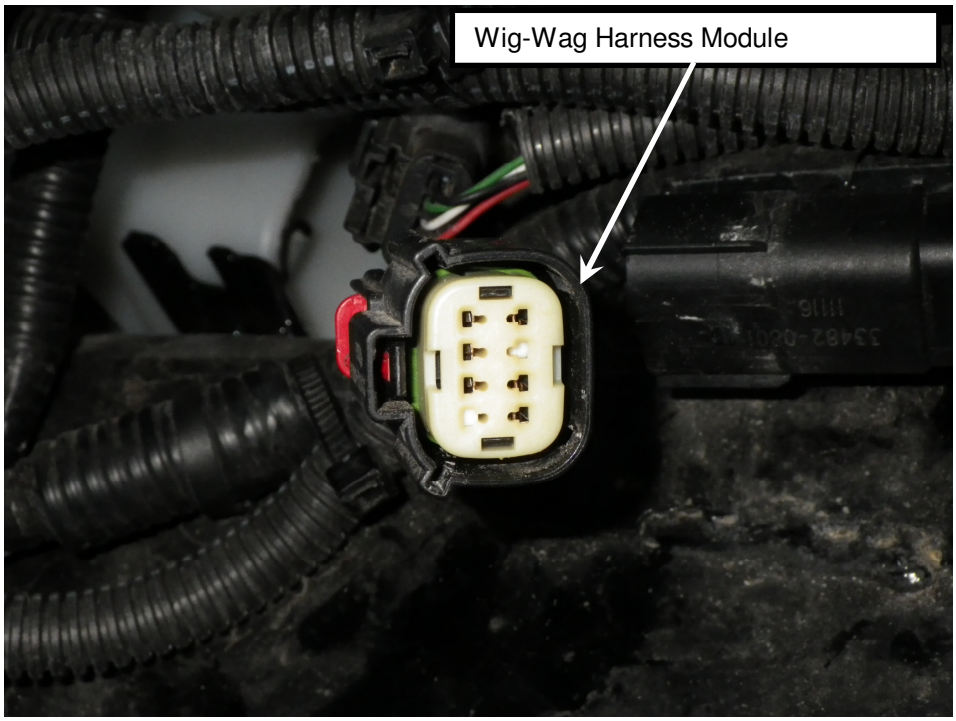
Sedan Trunk Upfit Package (854) Content Description

Front Lighting Solution - Wig-Wag LED and Front Corner LED Lights Connector



Part #: CU2Z-14S411-ALA

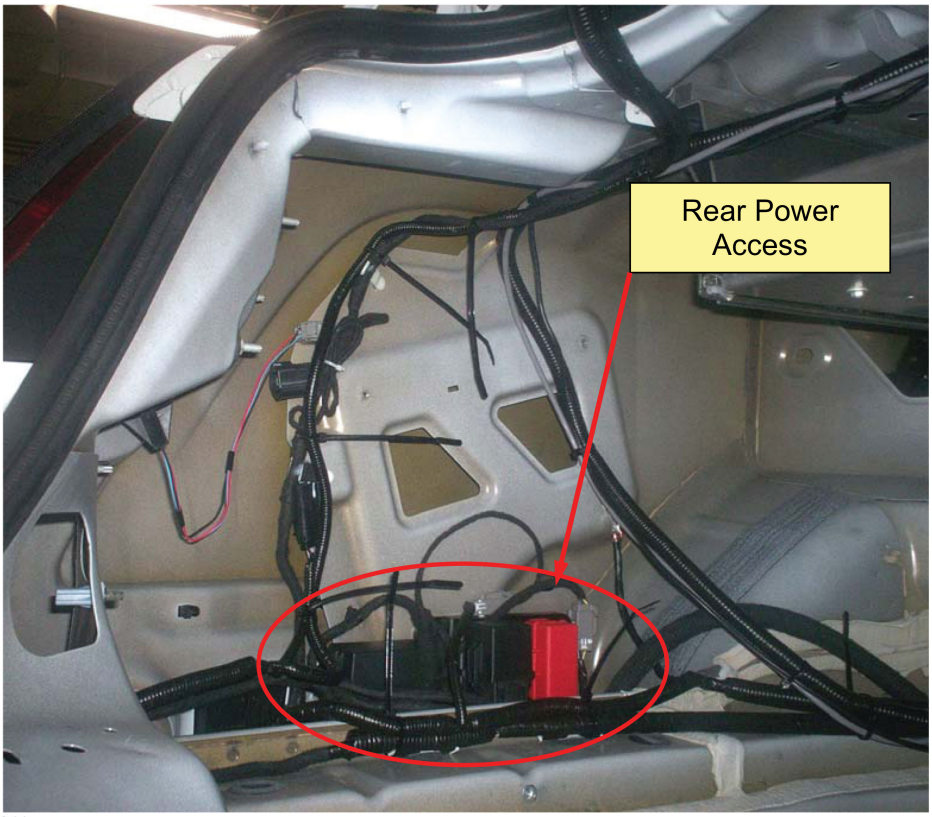
Pin #	Description	Fuse	Wire Color
1	Wig-Wag Control		VT
2	Wig-Wag Pass Side Pattern		GN-WH
3	Wig-Wag Driver Side Pattern		GY
4	Open		
5	Wig-Wag Run/Start (20 A)	BJB #74	VT-BN
6	Front Corner LED Lights Control/Power		
7	Front Corner LED Lights Pattern		GY-BN
8	Wig-Wag Ground		BK-GY



Sedan Trunk Upfit Package (854) Content Description

Rear Power Access – Two fused 50 Amp Lines from underhood Battery Junction Box (BJB)

- Feed from BJB #1 and #2



N0141041

Sedan Trunk Upfit Package (854) Content Description

LED Lights Flash Pattern Connector – 2-way connector with BN-GY wires enables flash pattern changes for *all front or all rear LEDs*(see next page for location and connector pin configuration)

- **This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.**
- **See Whelen documentation for cleaning and care of the LED lens.**
- **FAILURE TO FOLLOW THESE PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**
-
- **Scan-Lock / Flash Pattern Change**

- A normally open momentary switch should be used to control Scan-Lock operation.

- To change flash pattern for all police LED lights on *rear* of vehicle at once:

- *In order to program flash patterns, the light head must be on. With the appropriate light heads activated:*
- **TO CHANGE PATTERNS:** To advance to the next available pattern apply +12VDC to pin #1for less than 1 second and release. To cycle back to the previous pattern apply +12VDC to pin #1 for more than 1 second and release.
- **TO CHANGE THE DEFAULT PATTERN:** When the desired pattern is displayed, allow it to run for more than 5 seconds. The light head will now display this pattern when initially activated.
- **TO RESTORE THE FACTORY DEFAULT PATTERN:** This will reset all patterns back to their default settings. With the light turned off, apply power to the pin #1. With power applied to pin #1, turn light on. Allow the unit to run for 3 seconds before removing power from pin #1.
- To change flash pattern for all police LED lights on front of vehicle at once, repeat above process using pin #2

- The following is a list of all the available flash patterns:

SYNC Patterns

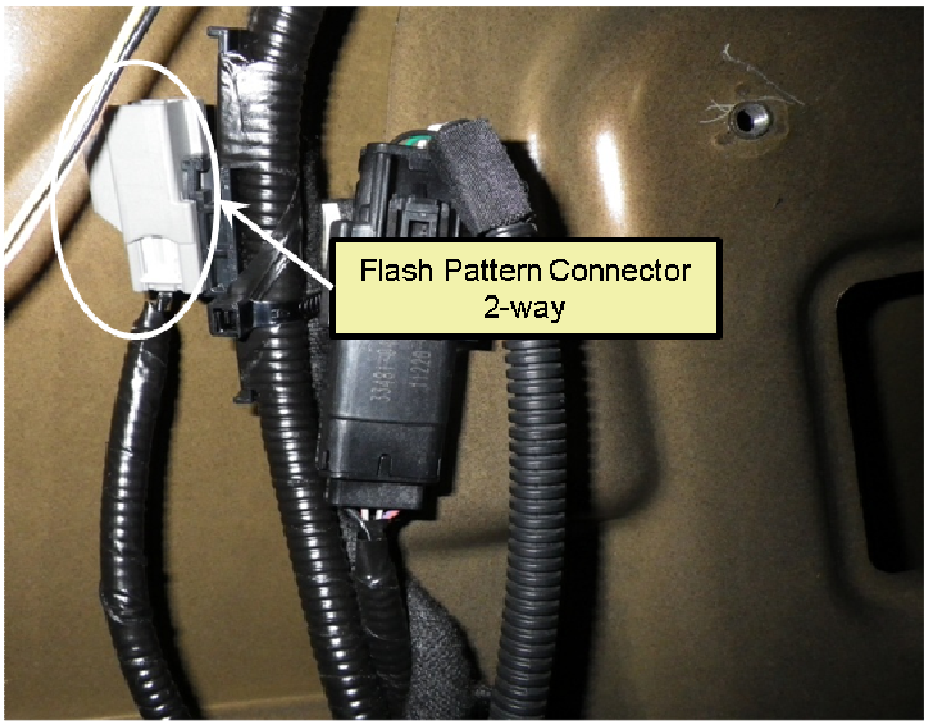
1. SignalAlert™75 PH.1
2. SignalAlert 75 PH.2
3. CometFlash®75 PH.1
4. CometFlash 75 PH.2
5. DoubleFlash 75 PH.1
6. DoubleFlash 75 PH.2
7. SingleFlash 75 PH.1
8. SingleFlash 75 PH.2
9. ComAlert™ PH.1
10. ComAlert PH.2
11. LongBurst™ PH.1
12. LongBurst PH.2
13. PingPong™ PH.1
14. PingPong PH.2

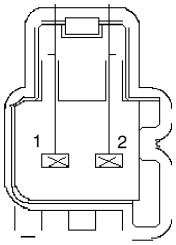
Non-SYNC Patterns

15. SingleFlash 60
16. SingleFlash 90
17. SingleFlash 120
18. SingleFlash 300
19. DoubleFlash 150
20. ComAlert 150
21. ActionFlash™1
22. ActionFlash 2
23. ModuFlash™
24. ActionScan™
25. Steady

Phase Operation
Phase 1 (PH. 1) flashes simultaneously with PH. 1
Phase 2 (PH. 2) flashes simultaneously with PH. 2
PH. 1 alternates with PH. 2

Sedan Trunk Upfit Package (854) Content Description





Part #: 3U2Z-14S411-LAB

Pin #	Description	Wire Color
1	Rear LED Lights Flash Pttrn	GY-BN
2	Front LED Lights Flash Pttrn	GY-BN

Sedan Trunk Upfit Package (854) Content Description

- **Change flash pattern *for individual LED* light heads:**
  - Locate the 4-way connector for LED light (see next page for procedure)

Part #: 8U2Z-14S411-TA

Pin #	Description	Wire Color
1	Control	VT-OG
2	Scan-Lock/Flash Pattern	GY-BN
3	Synch	GY-OG
4	Ground	BK-GY

Scan-Lock / Flash Pattern Change

- A normally open momentary switch should be used to control Scan-Lock operation.

- To change flash pattern for individual police LED lights on *rear* of vehicle at once:

- *In order to program flash patterns, the light head must be on. With the appropriate light head activated:*
- **TO CHANGE PATTERNS:** To advance to the next available pattern apply +12VDC to pin #2 for less than 1 second and release. To cycle back to the previous pattern apply +12VDC to pin #2 for more than 1 second and release.
- **TO CHANGE THE DEFAULT PATTERN:** When the desired pattern is displayed, allow it to run for more than 5 seconds. The light head will now display this pattern when initially activated.
- **TO RESTORE THE FACTORY DEFAULT PATTERN:** This will reset all patterns back to their default settings. With the light turned off, apply power to the pin #2. With power applied to pin #2, turn light on. Allow the unit to run for 3 seconds before removing power from pin #2.

- The following is a list of all the available flash patterns:

SYNC Patterns

1. SignalAlert™75 PH.1
2. SignalAlert 75 PH.2
3. CometFlash®75 PH.1
4. CometFlash 75 PH.2
5. DoubleFlash 75 PH.1
6. DoubleFlash 75 PH.2
7. SingleFlash 75 PH.1
8. SingleFlash 75 PH.2
9. ComAlert™ PH.1
10. ComAlert PH.2
11. LongBurst™ PH.1
12. LongBurst PH.2
13. PingPong™ PH.1
14. PingPong PH.2

Phase Operation

Phase 1 (PH. 1) flashes simultaneously with PH. 1
Phase 2 (PH. 2) flashes simultaneously with PH. 2
PH. 1 alternates with PH. 2

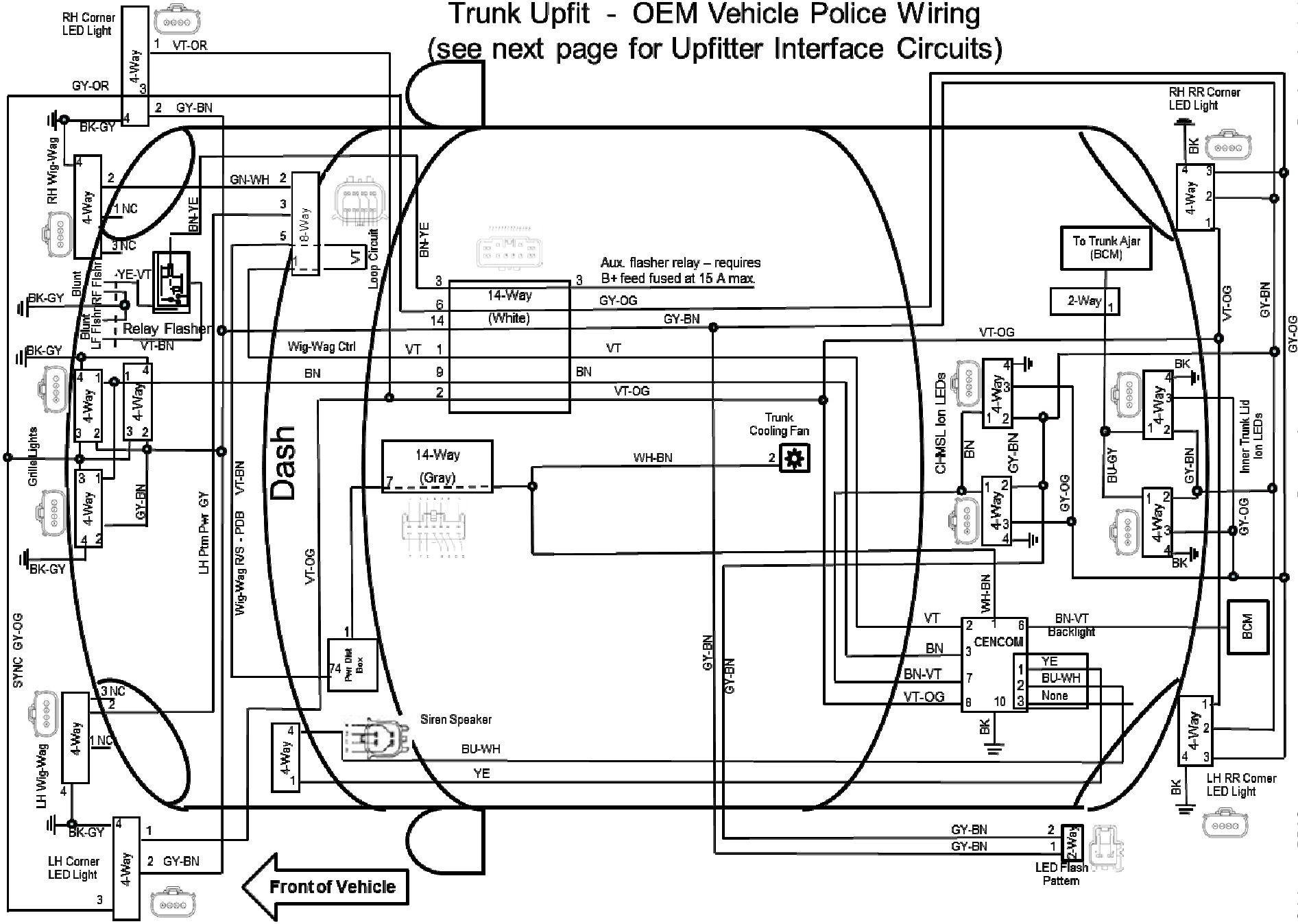
Non-SYNC Patterns

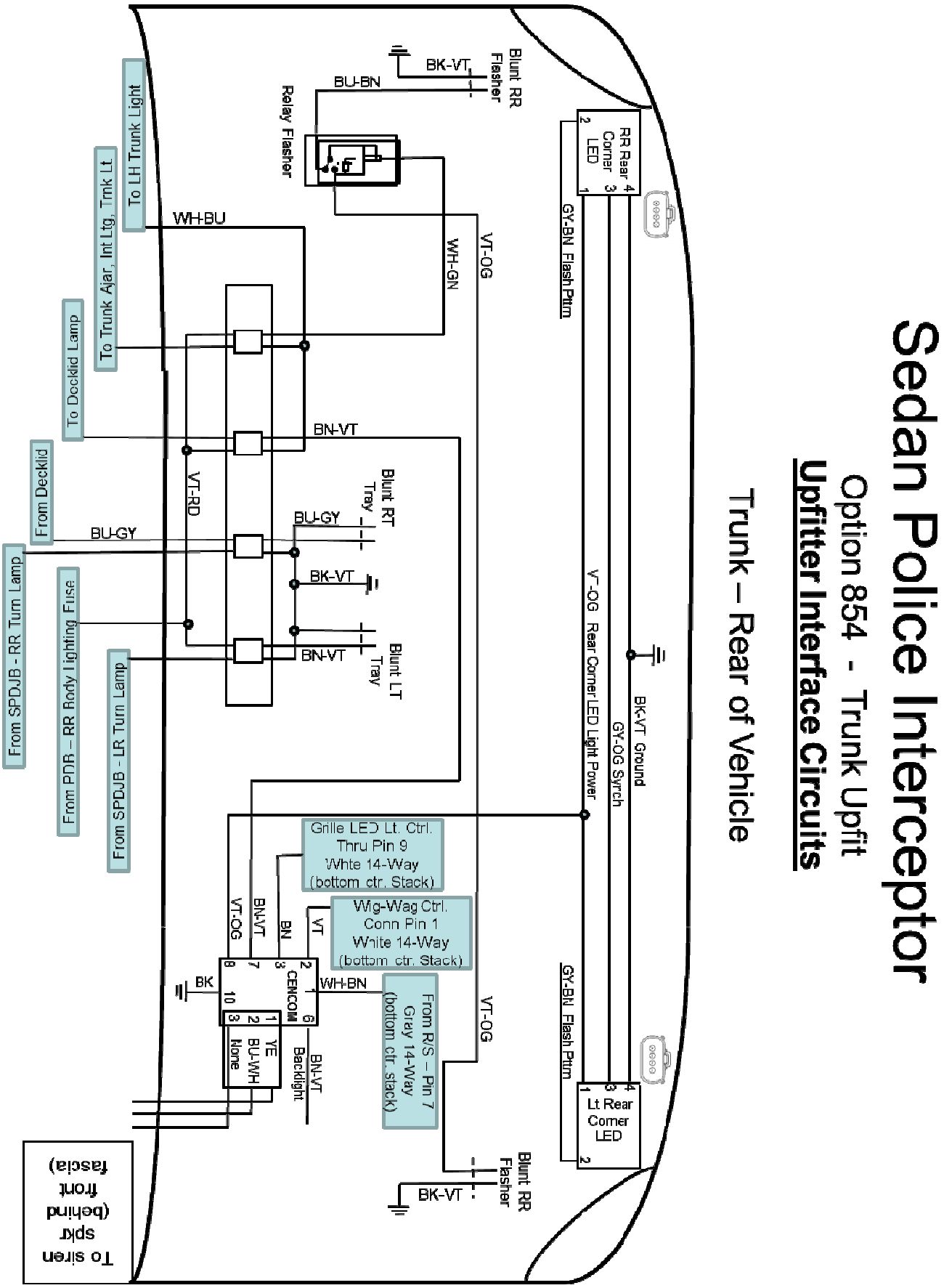
15. SingleFlash 60
16. SingleFlash 90
17. SingleFlash 120
18. SingleFlash 300
19. DoubleFlash 150
20. ComAlert 150
21. ActionFlash™1
22. ActionFlash 2
23. ModuFlash™
24. ActionScan™
25. Steady

Sedan Police Interceptor – Package 854

Trunk Upfit - OEM Vehicle Police Wiring

(see next page for Upfitter Interface Circuits)





If you have any questions, please contact the Ford Truck Body Builders Advisory Service as shown in the header of this bulletin.